

What is claimed is:

1. A semiconductor laser module, comprising:

a semiconductor laser element;

a frame for storing said semiconductor laser element
5 therein;

an optical fiber fixing portion being connected to said
frame; and

a flange being connected to said frame, and having a fixing
portion for fixing said frame on a substrate, wherein said flange
10 has a narrow width region between a fixing region, including a
fixing portion with said substrate therein, and said frame, and
said narrow width region is narrower than width of said fixing
region.

2. The semiconductor laser module, as defined in the claim
15 1, wherein:

said frame has a polygonal shape,

said flange has a first flange connecting to a first main
side of said frame and a second flange connecting to a second main
side of said frame opposing to said first main side thereof,

20 said first flange is provided in a first region on said
first main side, which is divided by an elongated line of a line
connecting a portion where said semiconductor laser element is
disposed and a portion where an optical fiber of said optical fiber
fixing portion is disposed, while no flange is provided in a second
25 region located on a reverse side of said first region, and

no flange is provided in a third region located on the second
main side of said frame on a side of said first region, opposing
to said first main side, while said second flange is provided in

a fourth region located on a side of said second region.

3. The semiconductor laser module, as defined in the claim 1, wherein:

said frame has a polygonal shape,

5 said flange has a first flange connecting to a first main side of said frame and a second flange connecting to a second main side of said frame opposing to said first main side thereof,

10 the connecting portion of said first flange to said frame and said connecting portion of said first flange are disposed in a first region on said first main side, which is divided by an elongated line of a line connecting a portion where said semiconductor laser element is disposed and a portion where an optical fiber of said optical fiber fixing portion is disposed,

15 the connecting portion of said second flange to said frame and said connecting portion of said second flange are disposed in a fourth region, locating at a side of said second region on the second main side of said frame opposing to said first side thereof.

20 4. The semiconductor laser module, as defined in the claim 1, wherein:

said frame has a polygonal shape,

said flange has a first flange connecting to a first main side of said frame and a second flange connecting to a second main side of said frame opposing to said first main side thereof,

25 the connecting portion of said first flange to said frame and said fixing portion of said first flange are provided in a first region on said first main side, which is divided by an elongated line of a line connecting a portion where said semiconductor laser element is disposed and a portion where an optical fiber of said optical fiber fixing portion is disposed, and

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the connecting portion of said second flange to said frame and said fixing portion of said flange are provided in a fourth region located on a side of said second region on the second main side of said frame, opposing to said first main side.

5 5. The semiconductor laser module, as defined in the claim 1, wherein said fixing region and said narrow width region are so formed that difference between those on a side surface of said flange at a side far from said semiconductor element is larger than that between said fixing region and said narrow width region
10 on the side surface of said flange at a side near to said semiconductor element.

6. The semiconductor laser module, as defined in the claim 1, wherein thickness of said flange in said narrow width region is formed to be thinner than that in said fixing region thereof.

15 7. A semiconductor laser module, comprising:

a semiconductor laser element;

a mounting substrate for mounting said semiconductor laser element thereon;

a frame for storing said substrate therein;

20 an optical fiber fixing portion being connected to said frame; and

a flange being connected to said frame, and having a fixing portion for fixing said frame on a substrate, wherein said flange has a narrow width region between a fixing region, including a
25 fixing portion with said substrate therein, and

thermal expansion coefficients α of material making up said mounting substrate and said frame sidewall and said substrate have following relationship:

said frame sidewall $\alpha_1 >$ said mounting substrate $\alpha_2 >$ said

substrate α_3 .

8. A semiconductor laser module, comprising:

a semiconductor laser element;

a mounting substrate for mounting said semiconductor laser
5 element thereon;

a frame for storing said substrate therein;

an optical fiber fixing portion being connected to said
frame; and

a flange being connected to said frame, and having a fixing
10 portion for fixing said frame on a substrate, wherein said flange
has a narrow width region between a fixing region, including a
fixing portion with said substrate therein, and

thermal expansion coefficients α of material making up said
mounting substrate and said frame sidewall and said substrate have
15 following relationship:

said frame sidewall $\alpha_1 < \text{said mounting substrate } \alpha_2 < \text{said}$
substrate α_3 .

9. A semiconductor laser module, comprising:

a semiconductor laser element;

a frame for storing said semiconductor laser element
20 therein; and

a substrate, on which said frame is fixed, wherein said
frame comprises a flange having an optical fiber fixing portion
and a fixing portion for fixing said frame on said substrate,

25 said flange has a narrow width region between a fixing region,
including a fixing portion with said substrate therein, and said
frame, being narrower than width of said fixing region,

further comprising a frame cover portion for covering over said semiconductor laser element and connecting to said frame, and a substrate cover portion for covering over said frame and connecting to said substrate, and

5 a member is provided between said frame cover portion, being lower in rigidity and being high in heat conductivity than said frame.

10 10. The semiconductor laser module, as defined in the claim 9, wherein said substrate cover portion is formed, so that thickness in a region where said member is disposed is thicker than that in an outside of the region where said member is disposed.